

# PROPOSED PROCEDURE FOR SITING INFILTRATION BMPs



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# CALTRANS DEVELOPED GUIDELINES



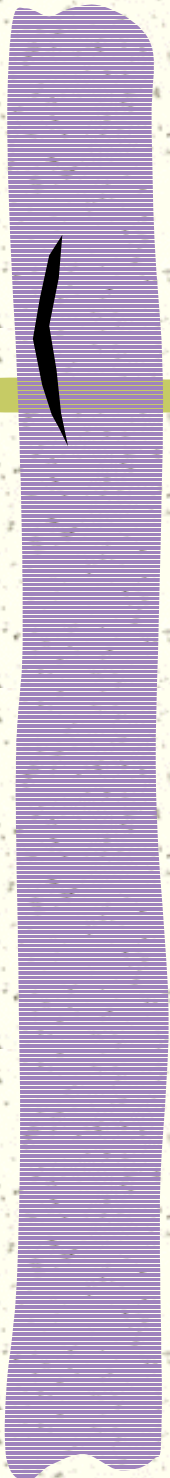
- Cooperation with RWQCBs and SWRCB
- Objective: Develop systematic procedures



# PROCEDURES FOR SITING INFILTRATION BMPs



- Four major elements
  - Pre-screening
  - Site screening
  - Site investigation
  - Preliminary design



# STEP 1: PRE-SCREENING FOR THE INFILTRATION BMP

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- Collect site-specific information
- Preliminary infiltration appropriateness
- Consultation with RWQCB



# COLLECTION OF SITE-SPECIFIC INFORMATION

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- Outfall inventory data (locations), alignment, right-of-way, ADT
- Tributary drainage areas, surrounding land uses
- Site surface hydrology data
- Basin plan groundwater beneficial uses and known impairments
- Caltrans runoff quality data

# COLLECTION OF SITE-SPECIFIC INFORMATION (continued)

- Runoff quality data for land use in catchment area
- Water quality treatment volume
- Site soil characteristic
  - Soil types, soil infiltration rates
- Existing groundwater and hydrogeology information
  - Maps, levels, quality, local concerns, water rights
  - Contaminant plumes
- Brief RWQCB, continue?



# PRELIMINARY DETERMINATION FOR APPROPRIATENESS OF INFILTRATION

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- Use data collected in Step 1
- Project engineer and stormwater coordinator
- Pre-screening decision tree for infiltration BMP

# PROCEDURES FOR PRELIMINARY INFILTRATION APPROPRIATENESS

- Influent limits on quality of water infiltrated
- Agencies, authorities, legal restrictions preventing consideration of infiltration
- Determine need for pretreatment
- Caltrans and RWQCB review data
  - Data adequate?
  - Continue?





## STEP 2: SITE SCREENING

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- Use data from pre-screening process
- Identify potential sites for field screening

# SITE SCREENING PROCEDURES



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- Estimate soil type
- Avoid fills and slopes greater than 15 percent
- Estimate seasonal high water table elevation
- Accept runoff from fully vegetated and impervious areas



# SITE SCREENING PROCEDURES (continued)

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- Consult RWQCB regarding distance setbacks and restrictions
- Estimate infiltration rate
- Calculate infiltration area
  - Continue?

# STEP 3: SITE INVESTIGATION

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- List candidate sites
  - (Within and outside R/W)
- Perform site investigation
  - Verify no regulatory permit required
  - No potential major underground utility interference
  - Review land use plan for tributary area



# SITE INVESTIGATION (continued)

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- Caltrans contribution to tributary runoff
- Potential diversions from additional tributary areas
- Potential impacts from diversions and costs
- Review infiltration feasibility
  - Continue?



## STEP 4: PRELIMINARY DESIGN

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- Obtain site topography
- Develop grading plan
- Consider upstream pretreatment
  - Biofiltration strips or vegetated swales
- Develop cost estimate for construction and O&M
- Review design
  - Continue?



# S U M M A R Y

- Must adjust procedures for site-specific situations
- Must work with RWQCB throughout entire process

